

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application	)	
No. Unknown	)	For: METHOD AND APPARATUS
	)	FOR UTILIZING CHANNEL
LING et al.	)	STATE INFORMATION IN A
	)	WIRELESS COMMUNICATION
Examiner: Unknown	)	SYSTEM
	)	
Filed: Herewith	)	Group No. Unknown

**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR § 1.97**

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Commissioner:

Applicants through their attorney submit herewith, in accordance with 37 CFR §1.98, a list references of which they are aware, which they believe may be material to the examination of this application and with respect to which there may be a duty to disclose in accordance with 37 CFR § 1.56.

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**CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8(a))**

I hereby certify that this correspondence is, on the date shown below, being:

**MAILING**

- ☒ deposited with the United States Postal Service with sufficient postage as Express Mail, in an envelope addressed to  
Mail Stop Patent Application,  
Commissioner for Patents,  
P.O. Box 1450, Alexandria, VA 22313-1450.

Depositor's Name: Karyn D. Lao  
(type or print name)

Date: 2/24/04

Signature: \_\_\_\_\_

**FACSIMILE**

- ☐ transmitted by facsimile to the Patent and Trademark Office.

Depositor's Name: \_\_\_\_\_  
(type or print name)

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

These have been previously submitted in the co-pending U.S. application serial no. 09/816,481, filed March 23, 2001, entitled, "METHOD AND APPARATUS FOR UTILIZING CHANNEL STATE INFORMATION IN A WIRELESS COMMUNICATION SYSTEM," and currently assigned to the assignee of the present application.

While the references identified herein may be material to the examination of this application pursuant to 37 CFR § 1.56, the citation of these references is not intended to constitute an admission that any reference referred to herein is prior art to the invention of this application unless specifically designated as such.

The filing of this document shall not be construed to mean that any search has been made or, that if made such search was complete or exhaustive, or that no other material information as defined in 37 CFR § 1.56 exists.

A list of the references cited herein is set forth on Form PTO-1449 which is enclosed herewith. In accordance with 37 CFR § 1.98(d) Applicants are not required to submit copies of the references and accordingly have not provided copies herewith. Applicants respectfully request that the Examiner return to Applicants the enclosed copy of the Form PTO-1449 indicating consideration of the references.

The subject application is believed patentable over any of the above-references.

Respectfully submitted,

Dated: 2/24/2004

By: 

Michael D. Graham, Reg. No. 51,751  
(858) 658-5877

QUALCOMM Incorporated  
5775 Morehouse Drive  
San Diego, California 92121  
Telephone: (858) 651-4125  
Facsimile: (858) 658-2502

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (REV. 7-80) PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use several sheets if necessary)</i>  DATE MAILED: 2/24/2004	ATTY. DOCKET NO. 010104C1	APPLICATION NO. Unknown
	APPLICANT LING et al.	
	FILING DATE herewith	GROUP Unknown

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	Ref No	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPRO- PRIATE
	A1	6,141,567	10/31/2000	Youssefmir et al.			
	A2	5,471,647	11/28/1995	Gerlach et al.			
	A3	5,960,399	9/28/99	Barclay, et al.			
	A4	6,473,467	10/29/02	Wallace et al.			

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	Ref No	DOCUMENT NUMBER	DATE	COUNTRY	NAME	CLASS	SUB CLASS
	B1	0951091A2	10/20/1999	EPO	Lucent Tech. (USA)		
	B2	9830047	07/09/1998	WO	Array Comm. (USA)		
	B3	9622662	07/25/1996	WO	Array Comm. (USA)		
	B4	0058942	10/5/00	WO	Koninklijke Electronics		

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Page, Etc.)

	C1	U.S. Application No. 09/532,492, filed March 22, 2000, entitled "HIGH EFFICIENCY, HIGH PERFORMANCE COMMUNICATIONS SYSTEM EMPLOYING MULTI-CARRIER MODULATION," Ahmad Jalali, et al., QUALCOMM Inc., California (USA).
	C2	U.S. Application No. 09/776,073, filed February 1, 2001, entitled "CODING SCHEME FOR A WIRELESS COMMUNICATION SYSTEM," Ivan J. Fernandez Corbaton, et al., QUALCOMM Inc., California (USA).
EXAMINER		DATE CONSIDERED
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (REV. 7-80) PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)  DATE MAILED: 2/24/2004	ATTY. DOCKET NO. 010104C1	APPLICATION NO. Unknown
	APPLICANT LING et al.	
	FILING DATE herewith	GROUP Unknown

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	Ref No	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPRO- PRIATE
	A5	6,131,016	10/10/00	Greenstein et al.			
	A6	5,973,642	10/26/1999	Li et al.			
	A7	5,844,922	12/1/1998	Wolf et al.			

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	Ref No	DOCUMENT NUMBER	DATE	COUNTRY	NAME	CLASS	SUB CLASS
	B5	0042600	7/20/00	WO	Nokia Mobile Phones Ltd.		
	B6	0784311	7/16/97	WO	Nokia Mobile Phones Ltd.		
	B7	2355834	5/2/01	GB	Nokia Mobile Phones Ltd.		
	B8	0171928	9/27/01	WO	QUALCOMM Inc.		
	B9	9809381	3/5/98	WO	Board of Trustees of the Leland Stanford Jr. University		

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Page, Etc.)

	C3	John A.C. Bingham, "Multicarrier Modulation for Data Transmission: An Idea Whose Time Has Come," IEEE Communications Magazine, May 1990 (pgs. 5-13).
	C4	Babak Hassibi et al., "High-Rate Codes that are Linear in Space and Time," Lucent Technologies, New Jersey, August 22, 2000, (pgs. 1-55).
	C5	Kuhn, Gary "Joint Optimization of Classifier and Feature Space in Speech Recognition" Proceedings of the Int'l Joint Conf. On Neural Networks 3: 709-714 (1992).
	C6	Paliwal, K.K. "Dimensionality Reduction of the Enhanced Feature Set for the HMM-Based Speech Recognizer" Digital Signal Processing 2: 157-173 (1992).
	C7	Baum et al., "A Comparison of Differential and Coherent Reception for a Coded OFDM System in a Low C/I Environment," Global Telecommunications Conference, Globalcom 1997, pages 300-304.
	C8	Jongren et al., "Utilizing Quantized Feedback Information in Orthogonal Space-Time Block Coding," 2000 IEEE Global Telecommunications Conference, 2(4): 995-999, November 27, 2000.
EXAMINER		DATE CONSIDERED
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